

# Queen Mary's Grammar School Key Stage 3



## Key Stage 3 Wider Reading List



## Key Stage 3 Homework Extension Activities



## Preface:

The wider-reading suggestions and tasks for extending and enriching learning that are contained within this booklet are intended to further pupils' interest and understanding in subjects they study in school.

Teachers in all departments have put time and thought into a range of activities that will hopefully ignite, rekindle, or fuel an intellectual curiosity for their subjects. The activities are designed to supplement, not replace, homework set by teachers according to the published homework policy.

Another way pupils can enhance their independent learning, in subjects they study or to extend a personal interest, is by reading some of the books on the whole-school wider reading list.

A number of departments have suggested undertaking visits to exciting places. Of course, it is vital that children be accompanied by a responsible adult when completing such activities.

Pupils are already expected to be reading regularly. We expect your son to read fiction and non-fiction books for at least 15 minutes every day. The benefits of reading widely extend across the entire curriculum and are proven to improve GCSE achievement, so this is in addition to homework set by each subject. Pupils' reading choices will be supported by reading recommendations from their teachers and the Library, but the whole-school wider reading list is populated by all Heads of Department to enhance learning and understanding in every subject taught at Queen Mary's – also with an eye for those who may wish to pursue personal interest in a subject they haven't been able to study.

It is important to note that all the extension activities and books on the whole-school wider reading list should be treated as suggestions for enrichment, challenge and *enjoyment*. It is not intended that pupils should be working through them systematically until completion; nor do we intend parents to rush out to buy every book on the list; nor is it intended that teachers will be collecting in extra work for marking. We hope that pupils will find inspiration in the reading lists and fulfilment in the activities, the intention of which is to engage learners and enthuse a love of learning.

Please feel free to recommend additions for future versions of this document. We would be happy to put your suggestions to departments for later inclusion.



Michael Lax  
Deputy Head



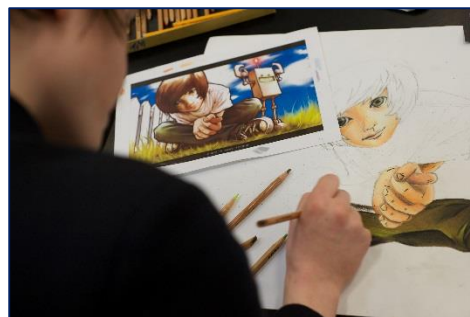
Adam Clay-Croome  
Head of English  
Head of House  
Whole-School Literacy Coordinator

## Art & Design

- Visit Walsall Art Gallery.
- Visit Birmingham Museum and Art Gallery.
- Take a series of photographs over time. Try capturing an object or scene several times as the light changes. For example, taking several pictures of a view out of a window. To capture the changing scene as the light disappears.
- Take a photograph of a friend. Use a lamp to alter the lighting and to cast shadows. Use the lighting to alter the mood of the image.
- Research 'why is art at school important?' Write an argument supporting this viewpoint and present it to someone at home.
- Look at a YouTube video showing you have to shade using your graphite pencils. Have a go!
- Look up 'potato printing' have a go at creating a design using your basic printing tools.
- Trying painting a view from a window at home.

### **Suggested Reading**

Pupils may wish to read biographies of artists studied (Taschen is an excellent publisher of such volumes).



## Biology

- Grow your own food. This can be anything from cress on the window sill to a small vegetable patch in the garden. Radishes grown in just a few weeks. Food production is covered in Year 11.
- Build a Cacti and Succulents collection. An excellent plant to own as it has some of the most obvious adaptations. We cover this topic in Year 10.
- YouTube has myriad videos. Students can look at Brainiac clips but progress onto more advanced topics quickly. Avoid any evolution videos as these can have hidden agendas. Evolution is covered in Year 11 and 13.
- Popular science books are a great way to get interested students into science. A good one is "How to Dunk a Doughnut". A good way is to go to a local bookshop and pick out a few titles. We have a limited number to loan in school. We encourage further reading at all levels but it is essential at 6<sup>th</sup> Form.
- The British Trust for Ornithology [www.bto.org](http://www.bto.org) run annual garden bird surveys and others that run through the year. A bird table in the garden is a good idea and can be used all year round. Taking data in this way is at the core of what ecological biologists do all the time.
- A visit to a museum is a good idea. The Think Tank at Millennium point in Birmingham is an ideal place to start with changing displays. This is a good way to encourage students into Biology at all years.
- Each biology student has a textbook which is rarely used in school lessons and should already be at home. Staff avoid using questions from this book so as to allow parents to make full use of it at home.

### **Suggested Reading**

Ben Goldacre, *Bad Science*  
Wynn Kapit and Lawrence M Elson,  
*The Anatomy Colouring Book*

## Chemistry

- Good scientists have curious minds. Scientific discovery rarely arises from a Eureka moment but rather someone saying 'That's odd' .....
- Take your voyage of scientific discovery outside of the lab with 'Illustrated Guide to Home Chemistry Experiments; All Lab, No Lecture (DIY Science)' by Robert Bruce Thompson or, perhaps more manageably, 'Chemistry in Your Kitchen' by Matthew Hartings.
- Of course chemistry can be consumed elsewhere. The following websites are all worth a visit if the visual and audible are more to your taste (but books are best):
- BBC Bitesize <http://www.bbc.co.uk/schools/gcsebitesize/chemistry/>
- ChemGuide <http://chemguide.co.uk/>
- Doc Brown <http://www.docbrown.info/>
- along with YouTube and BBC iPlayer,

### **Suggested Reading**

Simon Flynn, *The Science Magpie*

Nick Mann and Theodore Gray, *The Elements: A Visual Exploration of Every Known Atom in the Universe*

Nick Mann and Theodore Gray, *Molecules: The Elements and the Architecture of Everything*

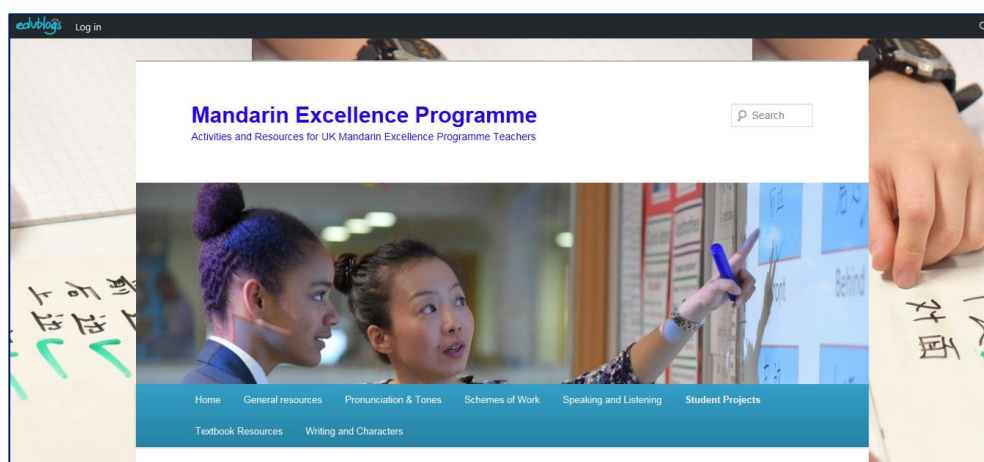
Bunpei Yorifuji, *Wonderful Life with the Elements*

## Chinese

The following online project-based resources for Chinese are suitable for all KS3 students

<http://mandarinexcellence.edublogs.org/mep-resources/year-7/>

<http://mandarinexcellence.edublogs.org/mep-resources/year-8/>



### **Suggested Reading**

Anthony C. Yu, *The Monkey and the Monk: An Abridgment Of The Journey To The West.*

## Computer Science and ICT

| Year 7         |  |   |
|----------------|--|---|
| Name           | Purpose  | Link  |
| Code Club      | Choose a tutorial to expand/begin your coding journey in HTML, Python or Scratch<br>Note: Enjoyed it? Why not join Year 7 code club Monday lunchtime.  | <a href="https://www.codeclub.org.uk/projects">https://www.codeclub.org.uk/projects</a>   |
| Teach ICT      | Great place to look up key terms for topics you are studying in class  | <a href="http://www.teach-ict.com/glossary/A.htm">http://www.teach-ict.com/glossary/A.htm</a>                                       |
| ECDL           | Video tutorials for Excel, PowerPoint, Word  | <a href="http://edividers.co.uk/index.php/ecdl">http://edividers.co.uk/index.php/ecdl</a>   |
| Year 8 and 9   |  |   |
| Name           | Purpose  | Link  |
| ICT Lounge     | Websites dedicated to preparation for the IGCSE exam. Great places to revise for the theory exam.  | <a href="https://www.ictlounge.com/html/overview_new.htm">https://www.ictlounge.com/html/overview_new.htm</a>                       |
| ICT Info       |  | <a href="https://www.igcseict.info/">https://www.igcseict.info/</a>   |
| Craig 'n' Dave | Want to find out a bit more about what studying computer science in Year 10 is like? Watch the videos here. There is a 5-minute video on every topic in the GCSE computer science specification. | <a href="http://student.craigndave.org/">http://student.craigndave.org/</a>   |
| W3C schools    | Want to find out more about HTML and CSS or even using JavaScript to add some dynamic content to your website. Learn more here.  | <a href="https://www.w3schools.com/">https://www.w3schools.com/</a>   |
| Khan Academy   | Tutorials to learn about JavaScript, HTML and CSS.   | <a href="https://www.khanacademy.org/computing/computer-programming">https://www.khanacademy.org/computing/computer-programming</a> |

### **Suggested Reading**

Malorie Blackman, *Hacker*

Robert Harris, *Enigma*

## **DT@QMGS: Independent Learning Opportunities**

The list below should be used to help you develop your knowledge and understanding of Design and Technology. You need to develop independent learning skills. They can be actioned at any time and are appropriate for all key stages.

### ***Fusion 360***

Download the software and create a free 3-year account. There are many on-line tutorials that can be used to develop your 3D CAD skills using Fusion 360.

### ***Google SketchUp***

Download the software. It is free. There are many on-line tutorials that can be used to develop your 3D CAD skills using Google SketchUp.





### **Flat-Pack Furniture**

You can learn a huge amount by helping to assemble flat-pack furniture. Look closely at the materials, components and fixtures being used. There is a local IKEA store at Wednesbury.

### **Product Analysis**

Everything that you use has been designed and manufactured. You can learn a lot by looking closely at the products that you use in your home. Consider the materials, manufacture, scale of production, ease of repair, sustainability and ergonomics.

### **Packaging Symbols**

Look closely at the packaging of products that you buy. Is the packaging needed? Can it be recycled? Could it be reduced? What symbols are there on the packaging?

### **Scrap Book**

Look through magazines and newspapers for articles that relate to D&T, engineering, architecture and sustainability. Cut them out, stick them into the scrap book and then annotate the cuttings with your analysis.

### **Product Disassembly**

You can learn a lot about products by taking them apart. Try separating every single component part. To recycle efficiently every material and component must be separated. How are the components joined? Is the product designed for easy disassembly?

### **The 6 Rs: Recycle, Re-use, Reduce, Repair, Refuse and Rethink**

Look closely in your home and in your daily life. What do you recycle? What do you repair? Look closely at the items that you place in your recycling bin. Look closely at items that you do not recycle? Could they be recycled? Do you maintain/repair your bicycle? What about the family car?

### **YouTube**

There are many excellent video clips relevant to D&T, engineering, manufacturing and architecture.

### **Books**

Read a book from the D&T department reading list.

### **Trips and Visits**

There are many relevant places that you can visit. The Design Museum in London, The Science Museum in London, The Bauhaus Archive in Berlin, JCB, Jaguar Land Rover, Toyota and Coca Cola are some possibilities.



### **eResources: PINTEREST and Twitter**

The QMGs D&T department has accounts for both PINTEREST and Twitter (@QMGSdT).

### **Sketching and Designing**

*"Designing is about making things better"*. Choose any product and sketch ways of improving it. You could improve the aesthetics, performance, manufacture, ease of maintenance or its packaging.

#### **Suggested Reading**

Alberto Alessi, *The Dream Factory: Alessi Since 1921*  
Dan Cruickshank, *A History of Architecture in 100 Buildings*  
Design Museum and Sophie Lovell, *Berlin in Fifty Design Icons*  
Design Museum and Deyan Sudjic, *London in Fifty Design Icons*  
Brian Larkman and Gerald Witcomb, *Metalwork* (How to do it series)  
Barbara Radice, *Memphis*  
Stuart Walker, *Sustainable by Design*

# English

## 1) Read more!

Read one of the books on the whole-school wider reading list, and improve your English skills in the process by answering one or more of these questions each time you finish reading.

Challenge yourself whenever you read a fiction or non-fiction text ...

### Comprehension

- *What happened in what I have just read?*
- *What new information have I learned?*

### Critical reading

- *What has the writer hinted or implied?*
- *What ideas has the writer made me think about?*

### Key quotes

- *Which phrases or sentences stand out?*
- *What is the shortest quote I can find that summarizes a key point?*

### Analysing writers' choices

- *Did a technique used by the writer awake my imagination? Can I name that technique?*

### Evaluating text

- *What thoughts or feelings do I have about what I have just read?*
- *Have my thoughts or feelings changed during my reading? Why?*

### Context

- *How does what I have just read link to what I know of the writer and their times?*
- *How does life in the text compare to my life?*

You should already be reading fiction and non-fiction texts for at least 15 minutes each, every day outside of lessons, as part of your literacy education. Answering the questions above is designed to enhance your thinking about texts.

## 2) Write more!

- **Keep a diary**
- Write a short story about events in your day, thoughts or feelings you've had, or just about whatever occupies your mind.
- "I would consider my diary serves the same purpose as going for a walk or a run. They are all physical ways of clearing a mental landscape." — Nick Murphy
- "Who else but me is ever going to read these letters?" — Anne Frank
- **Ask your parents if they need any letters writing to the local council etc. and have a go at drafting for them.**
- **Write for the QM Observer; speak to Mr Kolaric about opportunities to write news stories.**
- **Open a Goodreads account: write then publish your own reviews of books.**



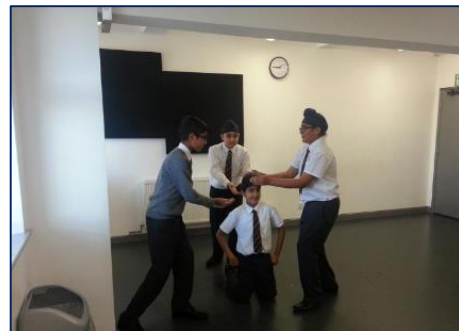
### 3) Watch quality drama!

Discuss the merits of excellent films or television shows you have seen with family or friends.

**Watch one of these plays (some of which are available on DVD):**

#### Age 12+

- Willy Russell, *Our Day Out*  
<<https://www.youtube.com/watch?v=yC94lOtTJrc>>
- George Bernard Shaw, *Pygmalion*  
<<https://www.youtube.com/watch?v=MTpD0mQ4LUM>>
- Agatha Christie, *Witness for the Prosecution*  
<<https://www.youtube.com/watch?v=pjElsGauX04>>



#### Age 15+

- Anton Chekhov, *The Wood Demon / Uncle Vanya*  
<<https://www.youtube.com/watch?v=IHHuKAtJbaM>>
- Moliere, *Tartuffe* <<https://www.youtube.com/watch?v=zzAKre-b4DI>>
- Willy Russell, *Educating Rita* <<https://www.youtube.com/watch?v=4z8OcnWU-Y>>
- Oscar Wilde, *The Importance of Being Earnest*  
<<https://www.youtube.com/watch?v=WoOjUMkRuQM>>

**Visit the theatre!**

### 4) Watch one of these documentaries (some of which are available on DVD)!

- Michael Scott's *Ancient Greece: The Greatest Show on Earth* gives a history of Greek tragedy, a bedrock of later literary form <<https://www.youtube.com/watch?v=FAkLTWQUbG8>>
- Michael Wood's *In Search of Beowulf* introduces you to Anglo-Saxon literature  
<<https://www.youtube.com/watch?v=1C0sFXU0SLo>>
- James Shapiro, *The King and the Playwright* is a historically focused series about Shakespeare's "middle period" <[https://www.youtube.com/watch?v=SRFF2rd0\\_uk](https://www.youtube.com/watch?v=SRFF2rd0_uk)>
- Adam Nicholson's *When God Spoke English* covers the writing of the *Authorized Version* of the Bible and how it took its place in English Literature  
<<https://www.youtube.com/watch?v=aa4f9c8lnog>>
- Armando Iannucci in *Milton's Heaven and Hell* offers a light-hearted look at a dark topic taking in the surprisingly interesting life of John Milton  
<[https://www.youtube.com/watch?v=4j\\_itIVgOk](https://www.youtube.com/watch?v=4j_itIVgOk)>
- Stephen Fry and the *Gutenberg Press* explores the invention of the printing press which transformed literature <<https://www.youtube.com/watch?v=aa4f9c8lnog>>



## 5) Visit literary locations!

Visit sites of literary importance such as Sarehole Mill, Birmingham; Stratford-upon-Avon, Warwickshire; Haworth, West Yorkshire; Whitby, North Yorkshire. The website <http://www.lithouses.org> and the Twitter handle @literarybritain have more suggestions for outings. Try doing some research and reading something by the author before you go or while you're there.

### **Suggested Reading**

In addition to asking their English teacher for reading recommendations based on their interests, these are just a few books (including some series) pupils might benefit from reading:

#### Fiction

Douglas Adams, *The Hitchhiker's Guide to the Galaxy*  
J M Barrie, *Peter Pan*  
Catherine Barter, *Troublemakers*  
BB, *The Little Grey Men*  
Charles Dickens, *Oliver Twist*  
Charles Dickens, *Great Expectations*  
Mark Haddon, *The Curious Incident of the Dog in the Night-time* (contains swearing)  
George Orwell, *Animal Farm*  
R J Palacio, *Wonder*  
Philip Pullman, *His Dark Materials*  
Philip Pullman, *The Book of Dust*  
Arthur Ransome, *Swallows and Amazons*  
Robert Louis Stevenson, *Treasure Island*  
J R R Tolkien, *The Lord of the Rings*  
H G Wells, *The Time Machine*  
T H White, *The Once and Future King*  
Oscar Wilde, *The Complete Short Stories*

#### Poetry

Roald Dahl, *Revolting Rhymes*  
T S Eliot, *Old Possum's Book of Practical Cats*  
Carolyne Larrington (translator), *The Poetic Edda*

#### Plays

Giles Cooper, *Unman, Wittering and Zigo*  
J B Priestley, *An Inspector Calls*  
William Shakespeare, *A Midsummer Night's Dream* and *The Tempest*

#### Non-fiction

Anne Frank, *The Diary of a Young Girl*  
Lynne Truss, *Eats, Shoots and Leaves*  
Stanley Wells, *Why Shakespeare WAS Shakespeare* (free for Kindle)

## Drama

### **Suggested Reading**

Besides reading or watching plays whenever possible, including those on the English reading list, pupils may enjoy the following books and plays (some of which exist as film versions):

Susan Hill, *The Woman in Black*  
Nick Stafford, *War Horse*

## French

- Learn verbs from grammar section at back of text book
  - ER/IR/RE verbs
  - Irregular verbs
  - Present tense
  - Immediate future tense
  - Perfect tense
  - Imperfect tense
- Practise numbers by counting things around the house.
- Write a list in French of important dates for your family.
- Practise times by writing out your daily routine.
- Make labels in French for items round the home.
- Keep a diary in French.
- Write some menus in French.
- Write a schedule of household jobs to be done by the family.
- Write out your school timetable in French.
- Write a list of Christmas presents in French.
- Look through a family photo album and describe the people/what is going on.
- Read French comics – (bandes dessinées) borrow from school/find online – Astérix/Bob et Bobette/Boule et Bill/Gaston Lagaffe/Lucky Luke/Les Shtroumpfs/Tintin.
- Use these comics to:
  - Read for pleasure.
  - Write a summary of the plot.
  - Stop reading a page and write what you think the rest of the story will be.
  - Spot grammatical categories (adjectives/verbs, pronouns).
  - Create a new story with the characters from the comic.
  - Create a dialogue between some of your favourite characters.
  - Try to remember by heart the contents of one speech bubble.
  - Watch French cartoon adaptations of the comics listed above.
- Use language learning websites with self-check exercises on vocabulary and grammar:
- Languages online.org.uk .
- Learn vocabulary - lists at end of each chapter in textbook.



### **Suggested Reading**

Comics: Astérix, Bob et Bobette, Boule et Bill, Gaston Lagaffe, Lucky Luke, Les Shtroumpfs and Tintin

Additionally, children's books are available to download at:

<http://www.childrensbooksforever.com/childrenpages/French.html>

and French fables and poems can be found in the Student Shared Area in the French folder.

## Geography

- Read the latest article posted on our Twitter feed @qmgsgeoging
- Draw a world map from memory – compare it to your atlas and see how you might make some improvements.
- Take a photograph every day – you could focus on a different theme each week, such as water, the sky, buildings, humans and transport.
- Watch the news each night and see what topics relate to geography.
- Create a scrap book of “Amazing Places” you would like you visit in the future.
- Study the geography of sport – map out where the Premier League teams. Are there any patterns?
- Create a landscape in a shoe box – it could be focused on the human geography or physical geography. Can you show Walsall in a shoe box? Or a river?
- Use Google Earth to create a pin map of places you have visited in the UK, Europe and further afield.
- Study your home and research how it could be more energy efficient and save your family money on electricity and gas bills. How much can you save your family? Does your energy efficient investment save more than it costs?
- Find out the top 10 cities by population in 1950 and add it to a blank world map. Now look for the top 10 cities today. Where has there been the biggest change?
- How many food miles can you rack up? Look at the food labels on your products and work out how far away your food has come from. What are the impacts (good and bad) of food from overseas?
- Take a trip to the library and look up some books related to volcanoes, maps and world problems.
- What’s your high score on <https://geoguessr.com/>?
- Where was the last earthquake? <https://earthquake.usgs.gov/earthquakes/map/>
- Go for a walk! How many different plants and animals can you spot?
- Keep a weather diary – how does it change over time? Can you see any patterns?
- Visit your local Forestry Centre – from Cannock Chase to Rolleston in Derbyshire.
- Find headlines related to migration and population. Create a tally chart of positive to negative. Is it balanced?
- Use <http://www.Gapminder.org> to study different geographical patterns around the world. What happened to deaths due to car accidents in Sweden?
- Go on a Sightseeing Tour on Google Earth.
- Birmingham Airport is growing. Write a reasoned argument for a new destination not already served by the airport.
- Can you get them all? Download The Flag Quiz app on to your mobile or tablet.



### **Suggested Reading**

Gavin Pretor-Pinney, *The Cloudspotter's Guide*  
Christopher Somerville, *Never Eat Shredded Wheat*  
Whitley Strieber, *The Day After Tomorrow*  
Joe Simpson, *Touching the Void*

## History

Watch some television documentaries:

### Year 7

- *Battlefield Britain*, Dan Snow series: esp Battle of Hastings
- *History of Britain*, series 1, Simon Schama
- Terry Jones' *Medieval Lives* series

### Year 8

- *Roots*, BBC TV series
- *History of Britain*, series 2, Simon Schama
- Dan Snow, *Battlefield Britain*: Naseby
- *Henry VII, The Winter King*. BBC
- *The Pendel witch child*, Youtube
- *British History's Biggest Fibs* With Lucy Worsley - Episode 1: War of the Roses, BBC

### Year 9

- *All Quiet on the Western Front*: book & film
- *BBC GCSE history Bite size*, The First & Second World Wars & 20<sup>th</sup> century

### Active learning

- Local castle visits: Warwick, Kenilworth
- Museums: Walsall Leather Museum, Black Country Museum, Inge street housing (Birmingham's Back-to Back housing)
- Family history World War I research: Commonwealth War Graves Association.



### Suggested Reading

Michael Arnold, *Traitor's Blood: Book 1 of The Civil War Chronicles*

John Man, *Genghis Khan*

Ian Mortimer, *The Time Traveller's Guide to Medieval England: A Handbook for Visitors to the Fourteenth Century*

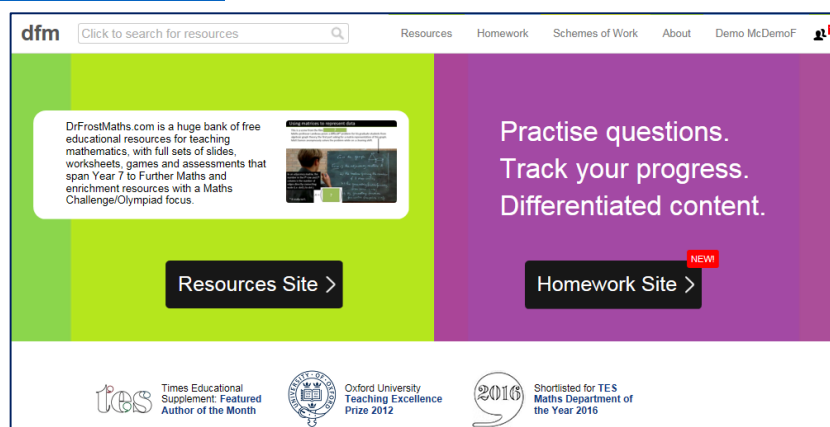
Harry Patch with Richard van Emden, *The Last Fighting Tommy: The Life of Harry Patch*

Erich Maria Remarque, *All Quiet on the Western Front*

## Mathematics

In addition to set homework in line with the school policy, this website provides more stretching questions as well as mathematical challenges.

<http://www.dr frostmaths.com/>



### Suggested Reading

Kjartan Poskitt, *Murderous Maths* (series)



## Music

- Play along to the backing tracks on the music website qmmusic.info.
- There's some great music theory quizzes on musictechteacher.com or musictheory.net.
- Ongoing instrumental home practice (if you have a keyboard at home, pick up a photocopy of the keyboards booklet).
- Improve your music theory by completing more exercises from the pupil theory booklet (Years 8 & 9).
- Visit one of the many fantastic concert venues here in the Midlands and listen to some Live Music.
- Eg. Symphony Hall/ Wolverhampton Civic Centre/ the Garrick Theatre Lichfield/Forest Arts Centre Walsall.

Be inspired, by watching famous musicians on You Tube:

Guitar – Sungha Jung/Brian May (Queen)/ Jimi Hendrix/Rodrigo y Gabriela

Trumpet – Alison Bolson/ Louis Armstrong/ Wynton Marsalis

Piano – Harvey Lin/ Jan Lisiecki/ Conrad Tao

Cello – Sheku Kanneh-Mason/ Yo Yo Ma/Gautier Capucon

Clarinet – Benny Goodman/ Larry Combs/ Acker Bilk

Alto sax – Alex Han/Kenny G

Violin – Vanessa Mae/Andrew Rieu/ Julia Fischer

Trombone – Glenn Miller/ Christian Limberg/ Ian Bousefield/ Don Lusher

Baritone/euphonium – Steven Mead/ David Childs

The Piano Guys

The Pentatonix

Listening.....the following artists link with topics covered in Years 7-9 (You Tube)

*Reggae* - Bob Marley/ UB40/ Jimmy Cliff

*Blues* - Ray Charles/ Louis Armstrong/ Benny Goodman/Duke Ellington/Glenn Miller

*Ostinato/Minimalism* – Philip Glass/ Steve Reich/ Mike Oldfield/Burundi Drum Music/ Gamelan music from Indonesia

*Variations* – Beethoven's 24 variations on 'Venni Amore' by Righini/ 'Variations' by Andrew Lloyd Webber

*Dance music* – any Waltz by Strauss & Tchaikovsky

Other useful YouTube clips:

BBC young musician of the year

Dr Who Proms 2013

Young person's guide to the orchestra

by Benjamin Britten

Last choir standing

BBC choir of the year

Visit the department's website at:

<https://www.qmmusic.info/>



### **Suggested Reading**

Eric Taylor, *First Steps in Music Theory: Grades 1-5*



## Physical Education

- The NHS states that 'to maintain a basic level of health, children and young people aged 5-18 need to complete at least 60 minutes of physical activity every day' (range from moderate i.e. cycling and playground activities, to vigorous activities i.e. running and rugby). On three days a week, these activities should involve exercises for strong muscles and exercises for strong bones. Keep a record/diary each week of the physical activity you complete on a daily basis to judge whether you are meeting this target.
- Calculate your Resting Heart Rate by finding your pulse (carotid pulse = neck or radial pulse = wrist). Now calculate your Maximum Heart Rate ( $220 - \text{age} = \text{MHR}$  in bpm). Calculate your aerobic training threshold (60-80% of MHR) and anaerobic training threshold (80%-90%). Your task is to exercise either aerobically or anaerobically and record your heart rate in the middle of your activity to ensure you meeting the heart rate thresholds.
- Measure your own height and weight, then calculate your own BMI.
- Keep a food diary for two days, writing down everything you eat and drink, and then use your diary to answer the following questions: is your diet balanced (explain your answer) and what do you need to add/remove from your diet to make it balanced?
- Think about a sport/activity that you do with other people. List the social health benefits you have gained from this.
- Prepare a warm-up for a sport you take part in regularly, remembering to include a pulse-raising exercise, stretching and joint mobilisation exercises, sport specific drills and a psychological warm-up. Lead others through your warm-up.
- Describe two injuries you have experienced as a result of taking part in sport and physical activity. How were they treated? How long did they take to heal? What, if anything, could you have done to avoid the injury?
- Athletics – research an Olympic Record for your chosen activity (name of athlete, distance/time, year of the record and their country of origin). Figure out the difference between your result and the Olympic athlete.



### **Suggested Reading**

Anon, *I Am The Secret Footballer: Lifting the Lid on the Beautiful Game*

Graeme Fowler, *Absolutely Foxed*

Simon Hughes, *And God Created Cricket*

Jonathan Trott, *Unguarded: My Autobiography*

Marcus Trescothick, *Coming Back to Me*

## Physics

- KS3 Bitesize physics <http://www.bbc.co.uk/education/subjects/zh2xsbk>
- Try reading Bill Bryson, *A short history of nearly everything*
- For interest in the space topic, watch Brian Cox's series: *Wonders of the Solar System* or *Wonders of the Universe*
- Go for a run, measure the distance you travelled and time yourself. Work out your average speed. Ask your friends to measure your time every hundred metres- plot a distance time graph of your results. You could even find your acceleration between two times by calculating your gradient.
- Try building magnets at home by stroking an iron nail with an existing magnet in the same direction. Can you demagnetise it?
- Do you have energy saving lightbulbs in your home? Can you replace an existing filament bulb with an energy saving one and calculate how much energy you'd save?
- Research clean energy. Look into developments in wave power and the different designs being developed. A tidal power station is being built across Cardiff bay- can you research how this will work and how much electricity it should generate.



### Suggested Reading

In addition to completing homework and reading from the course textbooks, pupils might further their reading for pleasure with the following:

Bill Bryson, *A Short History of Nearly Everything*

## Religion, Philosophy and Ethics

Please visit the RPE department's website and Twitter feed for a wide range of extension activities:



[www.qmgsrpe.co.uk](http://www.qmgsrpe.co.uk)

Twitter: @QMGSRPE



### Suggested Reading

Simon Blackburn, *Think*  
Stephen Law, *The Philosophy Gym*  
Plato, *Apology, Crito and The Meno*  
Voltaire, *Candide*

## Spanish

- Learn verbs from grammar section at back of text book
  - AR/ER/IR verbs
  - Irregular verbs
  - Reflexive verbs
  - Stem-changing verbs
  - Present tense
  - Immediate future tense
  - Perfect tense
  - Imperfect tense
- Practise numbers by counting items around the house
- Write a list in Spanish of important dates for your family
- Practise times by writing out your daily routine with times
- Make labels in Spanish for items round the home
- Keep a diary in Spanish
- Write some menus in Spanish
- Write a timetable of household jobs to be done by the family
- Write out your school timetable in Spanish
- Write a list of Christmas presents in Spanish
- Look through a family photo album and describe the people/what is going on Watch Spanish cartoons – online/see staff
- Use language learning websites with self-marking exercises on vocabulary and grammar:

Languages online.org.uk

Learn vocabulary – lists at the end of each chapter in the text book.



### **Suggested Reading**

Children's books are available to download at:

<http://www.childrensbooksforever.com/childrenpages/Spanish.html>

and on the Student Shared Area in the Spanish folder.